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REMARKS

Claims 1-75 remain in the application for consideration. In view of the following remarks, Applicant traverses the Office's rejections and respectfully requests that the application be forwarded on to issuance.

§102 Rejections

Claims 1-75 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,590,604 to Tucker et al. (hereinafter "Tucker").

Before undertaking a discussion of the substance of the Office's rejections, the following discussion of Applicant's disclosure and the reference to Tucker is provided in an attempt to assist the Office in appreciating certain distinctions between the claimed subject matter and Tucker.

Applicant's Disclosure

Applicant's disclosure and in particular the claimed subject matter pertains to methods and systems that permit efficient processing of *user-defined multimedia editing projects* that combine multiple different source data streams into a single compressed data stream that represents the project. The described approaches are directed to ensuring that those compressed source data stream portions that need to be uncompressed for processing are uncompressed and processed, while those compressed source data stream portions that do not need to be uncompressed are not uncompressed.

In one embodiment, a unique switch assembly is provided comprising one or more switches each of which being configured to process data streams. The

1 switch assembly is configured to process both compressed and uncompressed data
2 streams to provide the single compressed output data stream. In one embodiment,
3 three software-implemented switches are provided—one for handling
4 uncompressed source data streams, one for handling compressed source data
5 streams, and one for processing the output of the first two switches to provide the
6 single compressed data stream.

7 As an example, consider Fig. 40, which shows a simple multi-media editing
8 project that consists of two movies or sources 4000, 4002 that are to be displayed
9 back-to-back, with a transition 4004 (such as a fade) between them. Assume that
10 in addition to creating and viewing this project, the user wishes to create a new
11 movie file on disk that can be sent to their friends. Doing this can take a very long
12 time for the following reason. Typically, multi-media projects such as movies are
13 never just simply RGB data. Rather, the projects are most always compressed in
14 some way because video data is far too huge to efficiently store or send. So, in
15 compressing movie data, a data compressor might be used that takes as long as 1
16 sec/frame. For a short sixteen minute movie, this might take a couple of hours.
17 Usually uncompression using a data uncompressor is much faster. This is just the
18 nature of data compressors and uncompressors.

19 When video editing systems such as the one described in Fig. 6 are used, a
20 filter chain is typically built to include a decoder filter that decodes all of the data
21 so that it is no longer compressed—that is, the data is uncompressed so that it is
22 regular RGB data. For example, the Fig. 6 system shows a decoder filter 610
23 whose job it is to decode or uncompress media data.

24 Media data is uncompressed like this because, typically, a convenient and
25 efficient way to combine two video data streams together and blend them in some

1 way is to take two uncompressed RGB streams and combine and blend them. In
2 each filter chain then, only the uncompression filter (e.g. decoder filter 610)
3 “understands” the compressed video that it is to uncompress. For example, two
4 MPEG compressed frames generally cannot be provided to an effect and blended
5 together. Rather, the uncompressed data associated with the MPEG-compressed
6 frames is provided to an effect and blended. Thus far, in the examples given
7 above, all of the data streams that have been provided to a matrix switch have been
8 uncompressed data streams.

9 Consider the following observation with reference to the Fig. 40 project. If
10 one were to build this project as described above, using for example, the filter
11 graph structure 600 in Fig. 6, each of the source streams associated with sources A
12 and B would first be processed by their respective filter chains and uncompressed.
13 The source streams would then be combined and a transition would be
14 incorporated for time $t=8-10$. The entire project would then be subject to
15 recompression so that it could, for example, be written to disk. Notice, however,
16 that the only time that the source streams really need to be uncompressed, operated
17 upon, and recompressed is the time $t=8-10$ during which the transition is taking
18 place. The time before and after the transition simply incorporates the source
19 streams as they are in their original compressed state. More specifically, if the
20 user intended to create a new project file containing the Fig. 40 project, they
21 could, in theory, simply take the compressed portions of sources A and B outside
22 of the transition (i.e. for times $t=0-8, 10-16$ —within an appreciable variation) and
23 place them in the new project file. The transition (i.e. time $t=8-10$) could then be
24 processed by uncompressing the associated source stream portions, operating upon
25 them, recompressing them, and adding the recompressed portion to the new

1 project file. Thus, instead of having to perform the uncompression/recompression
2 operation for an entire sixteen minute project, the uncompression/recompression
3 need only be performed on two minutes of a project.

4 Fig. 41 illustrates an exemplary embodiment in which those portions of a
5 multi-media project that necessarily need to be uncompressed, operated upon, and
6 recompressed are processed in that manner. Likewise, those portions of a multi-
7 media project that do not need to be uncompressed and processed are left in their
8 compressed state. The two differently-processed project portions are then
9 combined to provide a single compressed output stream that contains both project
10 portions.

11 In this particular example, an object in the form of a switch assembly
12 comprising three software-implemented matrix switches is employed—a
13 uncompressed switch 4100, a compressed switch 4102, and a “smart” switch 4104.
14 It will be appreciated and understood that while this example utilizes a three-
15 switch implementation, it is possible to use a switch assembly having any suitable
16 number of switches or objects. For example, a single switch could be provided
17 and programmed to implement the desired functionality.

18 The uncompressed switch 4100 is configured to work on that part of a
19 project that actually needs to have uncompression and various operations, i.e.
20 transitions, effects and the like. In the Fig. 40 example, switch 4100 would work
21 on that portion of the project corresponding to time $t=8-10$. Since that time period
22 has a transition, a transition element 4100a is provided and receives the output of
23 switch 4100 during that time. The inputs to switch 4100 are uncompressed data
24 streams that correspond to sources A and B. Accordingly, the filter chains
25 associated with switch 4100 that correspond to sources A and B have decoder

1 filters incorporated in them (see, e.g. decoder filter 610 in Fig. 6). Portions of
2 each source are fed into the switch 4100, processed by the transition element or
3 filter 4100a at the switch's output, and re-routed to the primary output of the
4 switch as an uncompressed data stream.

5 The compressed switch 4102 is configured to process portions of the data
6 streams where nothing requiring uncompression operations is happening. Thus,
7 switch 4102 processes those portions of the data streams where there are no
8 transitions or effects applied, and where the data streams can remain in their
9 compressed state. Matrix switch 4102 receives at its input compressed data
10 streams and is configured to route the compressed data streams through to its
11 primary output as a compressed data stream. . In this example, the switch 4102
12 would process the compressed data stream associated with source A during time
13 $t=0-8$, and the compressed data stream associated with source B during time $t=10-$
14 16. The filter chains for each of the sources do not incorporate a decoder filter so
15 that the switch receives compressed data streams.

16 Smart switch 4104 is a smart recompression switch that is coupled to
17 receive the primary outputs of uncompressed switch 4100 and compressed switch
18 4102. Switch 4104 has a compressor component or element 4104a that is
19 configured to compress the uncompressed output of the uncompressed switch
20 4100. The output of the compressor component is then re-routed to become an
21 input to switch 4104. The primary output of switch 4104 is now the project's
22 primary output and constitutes a compressed data stream comprising the entire
23 project. This compressed output can, for example, be sent to a file writer so that it
24 can be written to a file or CD.

1 In the Fig. 40 project example, the Fig. 41 software switch assembly works
2 in the following way. From time $t=0-8$, the switch assembly allows the
3 compressed stream corresponding to source A to pass through switches 4102 and
4 4104 to become the primary output of switch 4104. From time $t= 8-10$, switch
5 4104 passes the uncompressed, blended output of switch 4100 through compressor
6 component 4104a, which is routed back around and serves as an input to switch
7 4104 which is, in turn, passed to the primary output of switch 4104. From time
8 $t=10-16$, the output of switch 4104 is the compressed input received from switch
9 4102 which corresponds to source B's compressed data stream. The resultant
10 output stream of switch 4104 is the compressed stream of the entire project.

11 12 **The Tucker Reference**

13 Tucker relates to a personal videoconferencing system that includes a
14 videoconferencing appliance connected to a personal computer through a
15 Universal Serial Bus (USB) or similar connection. The appliance is provided with
16 a video camera and microphone for generating local video and audio streams. The
17 local video and audio streams are compressed by a video and audio encoder
18 residing at the appliance, and the compressed video and audio streams are
19 conveyed to the personal computer over the USB connection. Tucker instructs
20 that the appliance may be further provided with an audio decoder for
21 decompressing a remote audio stream received by the personal computer through a
22 network interface and conveyed to the appliance via the USB connection. A video
23 decoder, located on the personal computer, is configured to decompress the local
24 video stream (received through the USB connection) as well as a remote video
25 stream received through the network interface. The decompressed video streams

1 are then sent to a monitor for display to a user. The decompressed audio stream
2 may be played either at a loudspeaker coupled to the audio decoder or at the
3 personal computer.

4 Tucker's Fig. 1 shows a representative front view of a personal
5 videoconferencing system 100. Videoconferencing system 100 generally includes
6 a videoconferencing appliance 102 coupled to a personal computer 104 via a
7 universal serial bus (USB) or comparable connection. PC 104 is provided with a
8 conventional monitor 106 for displaying images, text and other graphical
9 information to a user.

10 Appliance 102 is provided with a video camera 110 for continuously
11 capturing an image of a user positioned in front of videoconferencing system 100.
12 Appliance 102 is further provided with a microphone and an interface for an
13 external loudspeaker (not shown in FIG. 1) for, respectively, generating audio
14 signals representative of the user's speech and for reproducing the speech of one or
15 more remote conference participants. The remote conference participant's speech
16 may alternatively be reproduced at loudspeakers 112 or a headset (not shown)
17 connected to PC 104 through a sound card, or at speakers integrated within PC
18 104.

19 As instructed by Tucker, videoconferencing system 100 is generally
20 operative to generate and encode local audio and video streams for transmission to
21 a remote conference endpoint over a packet switched network, and to decode and
22 present remote audio and video streams received from the remote conference
23 endpoint over the network.

24 Fig. 2 is a block diagram showing interconnected hardware components of
25 appliance 102. Video camera 110 conventionally includes a sensor and associated

1 optics for continuously capturing the image of the user and generating signals
2 representative of the image.

3 Appliance 102 further includes a conventional microphone 204 for sensing
4 the speech of the local user and generating audio signals representative of the
5 speech. Microphone 204 may be integrated within the housing of
6 videoconferencing appliance 102, or may comprise an external microphone or
7 microphone array coupled to videoconferencing appliance 102 by a jack or other
8 suitable interface. Microphone 204 communicates with an audio codec 206, which
9 comprises circuitry or instructions for converting the analog signals produced by
10 microphone 204 to a digitized audio stream. Audio codec 206 is also configured to
11 perform digital-to-analog conversion in connection with an incoming audio data
12 stream so that the speech of the remote user may be reproduced at conventional
13 loudspeaker 208.

14 Locally generated audio and video streams from audio codec 206 and video
15 camera 110 are output to a processor 210, which is programmed to encode
16 (compress) the audio and video streams for subsequent delivery to the remote
17 conference endpoint(s) over the packet-switched network. Processor 210 is
18 generally configured to read in audio and video data from codec 206 and video
19 camera 110, to compress and perform other processing operations on the audio
20 and video data, and to output compressed audio and video streams to a PCI bus
21 216. Processor 210 is additionally configured to receive as input through PCI bus
22 216 an incoming (remote) compressed audio stream representative of the speech
23 of a remote conference participant, to decompress and otherwise process the
24 incoming audio stream and to direct the decompressed audio stream to audio
25

1 codec 206/speaker 208 so that the remote speech may be reproduced at appliance
2 102.

3 A universal serial bus (USB) interface 220, which includes an external
4 connector attachable to a cable extending between interface 220 and a
5 corresponding interface located at PC 104, is coupled to PCI bus 216 to enable bi-
6 directional communication between appliance 102 and PC 104.

7 8 **The Office's Arguments**

9 **Claim 1** recites an *editing system* comprising:

- 10
- 11 • a switch assembly comprising one or more software-implemented
12 matrix switches, individual matrix switches comprising:
 - 13 • one or more input pins configured to receive a data stream; and
 - 14 • one or more output pins configured to output a data stream;
 - 15 • the one or more input pins being routable to the one or more output
16 pins, the switch assembly being configured to process both
17 compressed and uncompressed data *streams to provide a*
18 *compressed output data stream that represents a user-defined*
19 *editing project.*

20 In making out the rejection of this claim, the Office argues that its subject
21 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
22 discloses this claim's subject matter in column 2, lines 18-25, and column 5, lines
23 23-47. These excerpts of Tucker appear below for the Office's convenience.

24 In accordance with one aspect of the invention, a personal
25 videoconferencing system includes a videoconferencing appliance
connected to a personal computer (PC) via a Universal Serial Bus (USB) or
comparable communication interface. Processing tasks for implementing
videoconferencing services are distributed between an onboard processor
located within the appliance and the central processing unit (CPU) of the

1 PC. In particular, the onboard processor handles compression of a locally
2 generated audio stream (typically representative of the speech of the local
3 user), compression of a locally generated video stream (typically
4 representative of an image of the local user), and echo cancellation and
5 decompression of at least one remotely generated audio stream (typically
6 representative of the speech of a remote user).

7 The compressed local audio and video streams, and the
8 decompressed and echo cancelled remote audio stream, are conveyed to the
9 PC through the USB interface. The compressed local audio and video
10 streams are directed to a network interface for transmission over a network
11 to a remote conference endpoint. The PC also receives compressed remote
12 audio and video streams. The PC is configured to handle decompression of
13 the compressed remote and local video streams, display of the local and
14 remote video streams, and (optionally) playing of the audio stream. The PC
15 additionally handles execution of a user interface, packetization of media
16 streams, call establishment and control operations, and low-level network
17 connectivity tasks.

18 *Column 2, lines 18-25.*

19 FIG. 3 is a block diagram showing hardware components of PC 104.
20 A USB interface 302, coupled to corresponding USB interface 220 of
21 appliance 102, sends and receives audio and video streams and related
22 control information to and from appliance 102. PC 104 is further provided
23 with a network interface 304 to enable communication between
24 videoconferencing system 100 and other network-connected devices, such
25 as another remote videoconferencing endpoint. Network interface 304 will
typically comprise an Ethernet card which is connected to a local area
network (LAN), cable modem, digital subscriber line (DSL) modem, or
other suitable network access device.

CPU 306, which may comprise an Intel.RTM. Pentium.RTM.-class
or other suitable processor, is generally operative to execute program
instructions and manage hardware resources. In accordance with the
distributed processing architecture of videoconferencing system 100, CPU
306 handles decoding of locally and remotely generated video streams,
display of the decoded video streams on monitor 106, media stream
packetization, call establishment and control, network connectivity
operations, data conferencing tasks, and execution of a user interface
(whereas processor 210 of appliance 102 handles encoding of locally

1 generated audio and video streams and decoding of the remotely generated
2 audio stream(s)).

3
4 *Column 5, lines 23-47.*

5 As noted above, Tucker pertains to a personal videoconferencing systems,
6 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
7 Processing Architecture." Tucker does not disclose or suggest an *editing system*
8 for representing a *user-defined editing project*. As such, it is virtually impossible
9 for Tucker to disclose or suggest a switch assembly that comprises part of an
10 *editing system* for representing a *user-defined editing project*. For at least this
11 reason, this claim is neither anticipated by nor rendered obvious in view of
12 Tucker. Accordingly, this claim is allowable.

13 **Claims 2-7** depend from claim 1 and are allowable as depending from an
14 allowable base claim. These claims are also allowable for their own recited
15 features which, in combination with those recited in claim 1, are neither disclosed
16 nor suggested in the references of record, either singly or in combination with one
17 another.

18 **Claim 8** recites an *editing system* comprising:

- 19
- a media processing object configured to:
 - receive multiple data streams comprising compressed and
20 uncompressed data streams; and
 - process the one or more data streams to provide a compressed
21 output data stream *that represents a media project*.
- 22

23 In making out the rejection of this claim, the Office argues that its subject
24 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
25

discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to a personal videoconferencing systems, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest an *editing system* that represents a *media project*. As such, it is virtually impossible for Tucker to disclose or suggest a media processing object that comprises part of an *editing system* that represents a *media project*. For at least this reason, this claim is neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

Claims 9-12 depend from claim 8 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 8, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 13 recites a *multi-media editing system* comprising:

- a switch assembly comprising one or more software-implemented matrix switches, individual matrix switches comprising:
- one or more input pins configured to receive a data stream; and
- one or more output pins configured to output a data stream;
- the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream *that represents a user-defined multi-media editing project*; and
- one or more data structures associated with the switch assembly and configured for use in programming the switch assembly to provide a routing scheme for routing input pins to output pins for a given multi-media editing project time line.

1
2 In making out the rejection of this claim, the Office argues that its subject
3 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
4 discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines
5 23-47.

6 As noted above, Tucker pertains to a personal videoconferencing systems,
7 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
8 Processing Architecture." Tucker does not disclose or suggest a *multi-media*
9 *editing system* for representing a *user-defined multi-media editing project*. As
10 such, it is virtually impossible for Tucker to disclose or suggest a switch assembly
11 and data structure(s) that comprise part of a *multi-media editing system* for
12 representing a *user-defined multi-media editing project*. For at least this reason,
13 this claim is neither anticipated by nor rendered obvious in view of Tucker.
14 Accordingly, this claim is allowable.

15 **Claims 14-20** depend from claim 13 and are allowable as depending from
16 an allowable base claim. These claims are also allowable for their own recited
17 features which, in combination with those recited in claim 13, are neither disclosed
18 nor suggested in the references of record, either singly or in combination with one
19 another.

20 **Claim 21** recites a *multi-media editing system* comprising:

- 21
- 22 • a switch assembly comprising one or more non-hardware matrix
switches, individual matrix switches comprising:
 - 23 • one or more input pins configured to receive a data stream; and
 - 24 • one or more output pins configured to output a data stream;
 - 25 • the one or more input pins being routable to the one or more output
pins, the switch assembly being configured to process both
compressed and uncompressed data streams to provide a compressed

1 output data stream that *represents a user-defined multi-media*
2 *editing project.*

3 In making out the rejection of this claim, the Office argues that its subject
4 matter is anticipated by Tucker.

5 As noted above, Tucker pertains to a personal videoconferencing systems,
6 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
7 Processing Architecture." Tucker does not disclose or suggest a *multi-media*
8 *editing system* for representing a *user-defined multi-media editing project*. As
9 such, it is virtually impossible for Tucker to disclose or suggest a switch assembly
10 that comprises part of a *multi-media editing system* for representing a *user-*
11 *defined multi-media editing project*. For at least this reason, this claim is neither
12 anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is
13 allowable.

14 **Claims 22-27** depend from claim 21 and are allowable as depending from
15 an allowable base claim. These claims are also allowable for their own recited
16 features which, in combination with those recited in claim 21, are neither disclosed
17 nor suggested in the references of record, either singly or in combination with one
18 another.

19 **Claim 28** recites an media processing system comprising:

- 20
- 21 • switch means for receiving compressed and uncompressed data
22 streams *associated with sources that are to be incorporated into a*
23 *project* and processing the compressed and uncompressed data
24 streams to provide *a single compressed output stream that*
25 *represents the project*; and
 - programming means associated with the switch means and
 configured to program the switch means to provide the single
 compressed output stream.

1
2 In making out the rejection of this claim, the Office argues that its subject
3 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
4 discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines
5 23-47.

6 As noted above, Tucker pertains to a personal videoconferencing systems,
7 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
8 Processing Architecture." Tucker does not disclose or suggest a *media processing*
9 *system* for representing a *project*, as that term is understood in the context of
10 Applicant's disclosure. As such, it is virtually impossible for Tucker to disclose or
11 suggest a switch means and programming means that comprise part of a *media*
12 *processing system* for representing a *project*. For at least this reason, this claim is
13 neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this
14 claim is allowable.

15 **Claims 29-32** depend from claim 28 and are allowable as depending from
16 an allowable base claim. These claims are also allowable for their own recited
17 features which, in combination with those recited in claim 28, are neither disclosed
18 nor suggested in the references of record, either singly or in combination with one
19 another.

20 **Claim 33** recites a *multi-media editing system* comprising:

- 21
- 22 • a first software-implemented matrix switch comprising one or more
23 input pins and one or more output pins, the one or more input pins
24 being routable to the one or more output pins, the first matrix switch
25 being configured to process one or more uncompressed data streams
and output an uncompressed data stream;
 - a second software-implemented matrix switch comprising one or
more input pins and one or more output pins, the one or more input

1 pins being routable to the one or more output pins, the second matrix
2 switch being configured to process one or more compressed data
3 streams and output a compressed data stream; and

- 4 • a third software-implemented matrix switch comprising multiple
5 input pins and multiple output pins, the input pins being routable to
6 one or more output pins, the third matrix switch being configured to
7 receive an uncompressed data stream from the first switch and a
8 compressed data stream from the second switch and process the
9 received data streams to provide a single compressed output data
10 stream that *represents a user-defined multi-media editing project*.

11 In making out the rejection of this claim, the Office argues that its subject
12 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
13 discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines
14 23-47.

15 As noted above, Tucker pertains to a personal videoconferencing systems,
16 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
17 Processing Architecture." Tucker does not disclose or suggest a *multi-media*
18 *editing system* for representing a *user-defined multi-media editing project*. As
19 such, it is virtually impossible for Tucker to disclose or suggest a first software-
20 implemented switch, a second software-implemented switch and a third software-
21 implemented switch that comprises part of a *multi-media editing system* for
22 representing a *user-defined multi-media editing project*. For at least this reason,
23 this claim is neither anticipated by nor rendered obvious in view of Tucker.
24 Accordingly, this claim is allowable.

25 **Claims 34-37** depend from claim 33 and are allowable as depending from
an allowable base claim. These claims are also allowable for their own recited
features which, in combination with those recited in claim 33, are neither disclosed

1 nor suggested in the references of record, either singly or in combination with one
2 another.

3 **Claim 38** recites a *multi-media editing system* comprising:

- 4 • first software switch means for processing one or more
5 uncompressed data streams to provide an uncompressed data stream,
6 the switch means comprising at least one feedback loop that
7 modifies a data stream that is output by the switch means and
8 provides the modified data stream as an input to the switch means;
- 9 • second software switch means for processing one or more
10 compressed data streams to provide a compressed data stream; and
- 11 • a third software switch means for receiving an uncompressed data
12 stream from the first software switch means and a compressed data
13 stream from the second software switch and processing the received
14 data streams to provide a single compressed output data stream that
15 *represents a user-defined multi-media editing project.*

16 In making out the rejection of this claim, the Office argues that its subject
17 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
18 discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines
19 23-47.

20 As noted above, Tucker pertains to a personal videoconferencing systems,
21 see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed
22 Processing Architecture." Tucker does not disclose or suggest a *multi-media*
23 *editing system* for representing a *user-defined multi-media editing project*. As
24 such, it is virtually impossible for Tucker to disclose or suggest first software
25 switch means, a second software switch means and third software switch means
that comprise part of a *multi-media editing system* for representing a *user-defined*
multi-media editing project. For at least this reason, this claim is neither

1 anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is
2 allowable.

3 **Claim 39** depends from claim 38 and is allowable as depending from an
4 allowable base claim. This claim is also allowable for its own recited features
5 which, in combination with those recited in claim 38, are neither disclosed nor
6 suggested in the references of record, either singly or in combination with one
7 another.

8 **Claim 40** recites a *multi-media editing system* comprising:

- 9
- 10 • a first software-implemented matrix switch comprising one or more
11 input pins and one or more output pins, the one or more input pins
12 being routable to the one or more output pins, the first matrix switch
being configured to process one or more uncompressed data streams
and output an uncompressed data stream;
- 13 • a second software-implemented matrix switch comprising one or
14 more input pins and one or more output pins, the one or more input
15 pins being routable to the one or more output pins, the second matrix
switch being configured to process one or more compressed data
streams and output a compressed data stream;
- 16 • a third software-implemented matrix switch comprising multiple
17 input pins and multiple output pins, the input pins being routable to
18 one or more output pins, the third matrix switch being configured to
19 receive an uncompressed data stream from the first switch and a
20 compressed data stream from the second switch and process the
21 received data streams to provide a single compressed output data
22 stream that *represents a user-defined multi-media editing project*;
and
- 23 • one or more data structures associated with at least some of the
24 matrix switches and configured for use in programming the
25 associated switches to provide a routing scheme for routing input
pins to output pins.

24 In making out the rejection of this claim, the Office argues that its subject
25 matter is anticipated by Tucker. Specifically, the Office argues that Tucker

discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to a personal videoconferencing systems, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest a *multi-media editing system* for representing a *user-defined multi-media editing project*. As such, it is virtually impossible for Tucker to disclose or suggest a first software-implemented matrix switch, a second software-implemented matrix switch, a third software-implemented matrix switch and data structure(s) that comprise part of a *multi-media editing system* for representing a *user-defined multi-media editing project*. For at least this reason, this claim is neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

Claims 41-43 depend from claim 40 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 40, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 44 recites a *multi-media editing method* comprising:

- *providing a switch assembly* comprising one or more software-implemented matrix switches, individual matrix switches comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream *that represents a user-defined multi-media editing project*; and

- programming the switch assembly using one or more data structures, said programming providing a routing scheme for routing input pins to output pins for a given time period.

In making out the rejection of this claim, the Office argues that its subject matter is anticipated by Tucker. Specifically, the Office argues that Tucker discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to personal videoconferencing systems and methods, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest a *multi-media editing method* for representing a *user-defined multi-media editing project*. As such, it is virtually impossible for Tucker to disclose or suggest providing a switch assembly and programming the switch assembly using data structure(s) in accordance with a *multi-media editing method* for representing a *user-defined multi-media editing project*. For at least this reason, this claim is neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

Claims 45-56 depend from claim 44 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 44, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 57 recites one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

- provide a switch assembly comprising multiple software-implemented matrix switches, individual matrix switches comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the switch assembly comprising:
- a first switch configured to process uncompressed data streams to provide an uncompressed output data stream;
- a second switch configured to process compressed data streams to provide a compressed output data stream; and
- a third switch configured to receive both the uncompressed and compressed output data streams and process the data streams to provide a compressed output data stream that *represents a user-defined multi-media editing project*; and
- program the switch assembly by defining a first grid structure containing data that defines an association between the first switch's input pins, at least one output pin and a time line defined by the editing project, and defining a second grid structure containing data that defines an association between the second switch's input pins, at least one output pin and the time line defined by the editing project.

In making out the rejection of this claim, the Office argues that its subject matter is anticipated by Tucker. Specifically, the Office argues that Tucker discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to personal videoconferencing systems and methods, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest a system that comprises instructions that provide a switch assembly for representing a *user-defined multi-media editing project*. As such, it is virtually impossible for Tucker to disclose or suggest such a system that comprises first, second and third switches as recited in this claim. For at least this reason, this claim is neither

1 anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is
2 allowable.

3 **Claims 58-62** depend from claim 57 and are allowable as depending from
4 an allowable base claim. These claims are also allowable for their own recited
5 features which, in combination with those recited in claim 57, are neither disclosed
6 nor suggested in the references of record, either singly or in combination with one
7 another.

8 **Claim 63** recites a *multi-media editing method* comprising:

- 9
- 10 • providing a first software-implemented matrix switch comprising
11 one or more input pins and one or more output pins, the one or more
12 input pins being routable to the one or more output pins, the first
13 matrix switch being configured to process one or more
14 uncompressed data streams and output an uncompressed data
15 stream;
- 16 • providing a second software-implemented matrix switch comprising
17 one or more input pins and one or more output pins, the one or more
18 input pins being routable to the one or more output pins, the second
19 matrix switch being configured to process one or more compressed
20 data streams and output a compressed data stream;
- 21 • providing a third software-implemented matrix switch comprising
22 multiple input pins and multiple output pins, the input pins being
23 routable to one or more output pins;
- 24 • receiving, with the third matrix switch, an uncompressed data stream
25 from the first switch and a compressed data stream from the second
switch; and
- processing the received data streams with the third switch to provide
a single compressed output data stream that *represents a user-*
defined multi-media editing project.

22 In making out the rejection of this claim, the Office argues that its subject
23 matter is anticipated by Tucker. Specifically, the Office argues that Tucker
24
25

1 discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines
2 23-47.

3 As noted above, Tucker pertains to personal videoconferencing systems and
4 methods, see, e.g. Tucker's title "Personal Videoconferencing System Having
5 Distributed Processing Architecture." Tucker does not disclose or suggest a *multi-*
6 *media editing method* for representing a *user-defined multi-media editing*
7 *project*. As such, it is virtually impossible for Tucker to disclose or suggest
8 providing a first, second and third software-implemented matrix switches as
9 recited in this claim. For at least this reason, this claim is neither anticipated by
10 nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

11 **Claims 64-66** depend from claim 63 and are allowable as depending from
12 an allowable base claim. These claims are also allowable for their own recited
13 features which, in combination with those recited in claim 63, are neither disclosed
14 nor suggested in the references of record, either singly or in combination with one
15 another.

16 **Claim 67** recites one or more computer-readable media having computer-
17 readable instructions thereon which, when executed by a computer, cause the
18 computer to:

- 19
- 20 • process at least one compressed data stream to provide an output
21 compressed data stream *that comprises a portion of a user-defined*
22 *multi-media editing project* that is associated with a data stream
23 source;
 - 24 • process one or more uncompressed data streams to manipulate the
25 one or more uncompressed data streams to provide an output
uncompressed data stream *that comprises a different portion of a*
user-defined multi-media editing project that is associated with one
or more data stream sources;
 - compress the output uncompressed data stream; and

- associate the output compressed data stream and the compressed output uncompressed data stream together to provide a compressed stream *that represents a user-defined multi-media editing project.*

In making out the rejection of this claim, the Office argues that its subject matter is anticipated by Tucker. Specifically, the Office argues that Tucker discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to personal videoconferencing systems and methods, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest a *multi-media editing system* for representing a *user-defined multi-media editing project.* For at least this reason, this claim is neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

Claims 68-69 depend from claim 67 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 67, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 70 recites one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

- receive and process one or more uncompressed data streams with a first software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins to output an uncompressed data stream;

- receive and process one or more compressed data streams with a second software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins to output a compressed data stream;
- receive and process the uncompressed data stream that is output by the first switch and the compressed data stream that is output by the second switch with a third software-implemented matrix switch comprising multiple input pins individual ones of which receive data streams, and one or more output pins individual ones of which provide data streams, the one or more input pins being routable to the one or more output pins to output, at one output pin, a compressed data stream that *represents a user-defined multi-media editing project*.

In making out the rejection of this claim, the Office argues that its subject matter is anticipated by Tucker. Specifically, the Office argues that Tucker discloses this claim's subject matter in column 2, lines 18-45, and column 5, lines 23-47.

As noted above, Tucker pertains to personal videoconferencing systems and methods, see, e.g. Tucker's title "Personal Videoconferencing System Having Distributed Processing Architecture." Tucker does not disclose or suggest a *multi-media editing system* for representing a *user-defined multi-media editing project*. For at least this reason, this claim is neither anticipated by nor rendered obvious in view of Tucker. Accordingly, this claim is allowable.

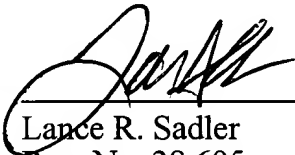
Claims 71-75 depend from claim 70 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 70, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

1 **Conclusion**

2 All of the claims are in condition for allowance. Accordingly, Applicant
3 requests a Notice of Allowability be issued forthwith. If the Office's next
4 anticipated action is to be anything other than issuance of a Notice of Allowability,
5 Applicant respectfully requests a telephone call for the purpose of scheduling an
6 interview.

7
8 Respectfully Submitted,

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10 Dated: 7/1/04

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